

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

**This Page Blank (uspto)**



12

## EUROPEAN PATENT APPLICATION

21 Application number: **91301773.7**

51 Int. Cl.<sup>5</sup>: **G07F 17/34**

22 Date of filing: **04.03.91**

30 Priority: **24.03.90 GB 9006665**

43 Date of publication of application:  
**02.10.91 Bulletin 91/40**

84 Designated Contracting States:  
**DE ES NL**

71 Applicant: **Bell-Fruit Manufacturing Company  
Limited  
Leen Gate Lenton  
Nottingham NG7 2LX (GB)**

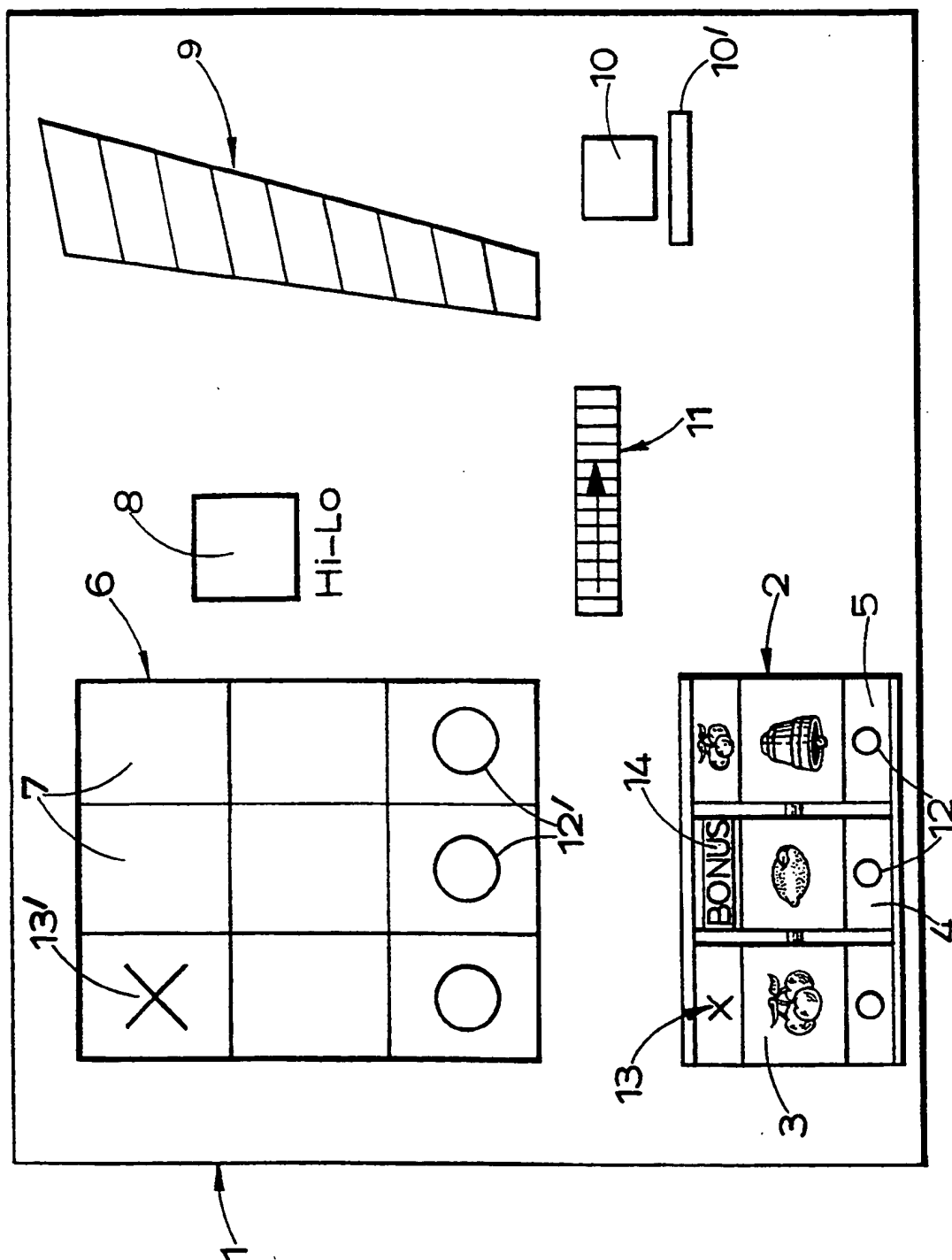
72 Inventor: **Farrell, Peter John  
80 Studland Way  
West Bridgeford, Nottingham (GB)  
Inventor: Lee, Michael Thomas  
17 St Austell Drive  
Wilford, Nottingham (GB)**

74 Representative: **Duncan, Angus Henry et al  
Barker, Brettell & Duncan 138 Hagley Road  
Edgbaston Birmingham, B16 9PW (GB)**

54 **Gaming and amusement machines.**

57 A gaming or amusement machine (otherwise known as a 'fruit' machine) has a display (1) having a first, reel, display (2) comprising a number of reels (3,4,5) carrying symbols (12, 13, 14) and a second, matrix, display (6) comprising a grid or matrix, the matrix display being adapted to display a first symbol (12') and a second symbol (13'). The reels carry first and second reel symbols (12 and 13) corresponding to the first and second matrix symbols (12' and 13') and when a first or second reel symbol is visible at the reel display (2) after a reel spin the corresponding first or second matrix symbol appears in the matrix display in a corresponding position in the matrix. Prizes are awarded for completed lines of symbols in the matrix display.

**EP 0 449 433 A2**



**FIG. 1.**

## GAMING AND AMUSEMENT MACHINES

This invention relates to gaming or amusement-with-prizes machines of the kind generally known as 'fruit machines', in which a number of reels carrying symbols (usually three reels, but sometimes more) are set in rotation and then stop in turn at random intervals and if the resulting combination of symbols on the three (or more) reels appearing on a given line in the display, the 'win line', is one which has been designated a winning combination, the player receives an award or a credit. Instead of actual reels, it is known to use other forms of display which simulate rotating reels to a greater or lesser degree, for example the Panascope, or a video screen on which images of the symbols appear. Such machines will hereinafter be referred to as of the kind set forth.

Many special features are provided nowadays in fruit machines, indeed they have to some extent taken over from the basic game, in that most of the bigger wins are obtained by the features rather than by the initial result when the reels first come to a halt. In a so called 'ladder' or 'trail' feature, steps in the ladder or trail may be illuminated as a result of certain symbols, e.g. symbols bearing superimposed numbers, appearing on the win line. When the 'ladder' or 'trail' is completed, a jackpot prize or another feature which may result in a jackpot prize may be awarded.

On certain occasions after a non-winning game, determined for example at random or when a particular symbol such as a "?" appears on the win line, a so called 'skill stop' or 'pseudo skill stop' feature may be provided to assist completion of a ladder or trail. In a 'skill stop' or 'pseudo skill stop' feature steps in the 'ladder' or 'trail' are illuminated either sequentially along the 'ladder' or 'trail' or for a brief period of time at random positions in the 'ladder' or 'trail' and the player attempts to stop the feature by performing a 'skill stop' operation at the instant when the end step of the 'ladder' or 'trail' is illuminated. In a 'pseudo skill stop' feature the machine itself determines whether or not the end step of the 'ladder' or 'trail' is illuminated, although it appears to the player that the instant the 'skill stop' operation is performed determines whether or not the trail is completed.

Amongst the many special features which are provided nowadays in fruit machines, one which has proved popular is the so-called 'nudge' feature, by which the player is sometimes given the opportunity at the end of a game which did not result in a win, to advance one or more of the reels by a single step, or sometimes more than one step, to bring a fresh symbol onto the win line and thereby change what was a losing combination into a winning one. This feature may be offered apparently at random after a non-winning game, or a number of 'nudges' determined in one of a variety of ways may be awarded as a special feature after completion of a 'ladder' or 'trail'.

One known type of special feature awarded after completion of a 'ladder' or 'trail' involves the illumination of some symbols in a number of rows or columns of symbols representing coins, tokens or nudges and the player is given one or more 50:50 chances to 'link up' the illuminated symbols by pressing a 'gamble' button. The feature ends when the player has exhausted these chances and he is then awarded as a prize the total number of coins, tokens or nudges which have been linked together during the feature.

The aim of the invention is to provide a still further and particularly attractive special feature on these lines. According to the invention a gaming or amusement-with-prizes machine comprises a first, reel, display comprising a number of reels carrying symbols and a second, matrix, display comprising a grid or matrix, the matrix display being adapted to display a first symbol and a second symbol.

Preferably the matrix has a plurality of display segments, such as squares, and can display first and second symbols simultaneously in different segments.

Preferably at least one, and most preferably each, segment is capable of displaying the first symbol and the second symbol as alternatives. The segment preferably displays only one symbol at any one time.

A first symbol displayed in a segment can preferably be changed to the second symbol during the playing of the machine.

The reels may carry first and second reel symbols or other differentiating indicia corresponding to the first and second matrix symbols, the appearance of the first or second reel symbols in the reel display upon a play of the machine resulting in the appearance of corresponding first or second matrix symbols in the matrix.

We prefer to have a 3 x 3 matrix, and a reel display having three reels with a central win line and upper and lower adjacent lines visible in the reel display (so that nine symbols are visible in the reel display) and arrange for a one-to-one correspondence between the positions in the matrix which show the first or second matrix symbols and the positions in the reel display of the first and second reel symbols or indicia.

The first and second reel symbols may be substantially the same as, or at least representations of, the first and second matrix symbols.

The game may have a feature whereby upon the winning of the feature all of the first and second matrix symbols displayed at that time in the matrix are changed to the same symbol, which may be the first or second symbol.

The matrix display may be held and continued over to successive spins of the reels.

Embodiments of the invention will now be described by way of example only, with reference to the accompanying drawings of which:-

Figure 1 shows a display of a first gaming machine; and

Figure 2 shows a display of a second gaming machine.

A fruit machine has a display 1, which is shown in Figure 1, and (not shown) a start button, a cancel button, hold buttons, nudge buttons, a skill-shot button, a collect button, a gamble button, and higher-lower gamble buttons. Some of the buttons may be provided as a single button serving more than one function at different times during the playing of the game.

The display 1 comprises a reel display 2 which has three reels, 3, 4 and 5 showing various reel symbols, a matrix display 6 comprising a 3 x 3 grid of nine segments 7, a fourth reel 8 with numbers from 1 to 12 on it, a ladder 9 indicating progressive prizes, a nudge-pot counter 10, and a skill-shot feature 11. The reels 3, 4, 5 carry the normal fruit symbols, plus first reel symbols of noughts 12 and second reel symbols of crosses 13. Each segment 7 of the matrix display can display a blank, a nought symbol 12' (comprising a first matrix symbol), or a cross 13' (comprising a second matrix symbol).

On any spin of the reels 3, 4, 5 any O's or X's shown in the nine symbols visible on the reel display 2 produce corresponding O's or X's in corresponding positions in the matrix display 6, as shown in Figure 1. The symbols displayed in the matrix 6 can be carried to the next play on a random or pseudo-random basis.

The player will enter the prize ladder 9 at a level dependent upon the number of complete lines of O's or X's shown in the matrix, from one to eight (if eight lines are possible in the reel display; we actually prefer to provide a maximum possible score of six lines). The ladder has twelve prize levels. Thus the player enters the ladder 9 at the level corresponding to the number of the lines completed.

When a line in the matrix is lit the player will have the option of (i) collecting the win corresponding to the relevant entry in the prize ladder 6 by pressing the collect button;

(ii) pressing the higher or lower button to spin the fourth reel, reel 8. If the guess that the next number at which the reel 8 comes to rest will be higher or lower than the previous number is correct the player advances one position up the prize ladder. If the guess is wrong a 'lose' lamp is illuminated and the feature is terminated. The player either automatically collects the prize on the ladder at which he already stands, or loses everything (the machine can of course be adapted to provide either result).

Pressing the higher/lower button also automatically adds a random/pseudo-random number of nudges to the nudge-pot indicator 10.

(iii) Collect the nudge-pot. This is an option when an 'exchange' light 10' is illuminated. If taken, the nudge pot will automatically step the reels 3, 4, 5 to the best possible win for the given number of nudges.

The reels 4, 5, 6 also include a 'bonus' symbol 14. When this appears on the central win line of the reel display the player is awarded one of the following in a random/pseudo-random manner:-

(a) Shuffle. The player may elect to shuffle the lit symbols in the matrix 6. The same number of O's and X's as are already lit will be shuffled. The player may decline this option by pressing the cancel button.

(b) All Crosses. All of the symbols in the matrix 6 which are lit change to crosses or stay as crosses, as appropriate. (It could also be arranged in a modification for all the symbols to be presented as O's, or both the O's and X's could change to the same third symbol).

(c) Shot. The unlit segments in the matrix 6 will flash at random, with O's and X's appearing at random for any particular unlit segment. The player is given a skill or pseudo-skill chance to stop a symbol in one of the segments. A chance of repeat shots is provided on a random basis.

(d) Superhold. The reels 3, 4, 5 will step one above the win line and one below the win line and the player will be able to hold any of the nine symbols originally in view on the win line, or a new symbol in the upper and lower adjacent line. He can in this way enter a O or a X in the upper or lower row of the matrix 6.

(e) Skill shot. A randomly chosen unlit segment 7 flashes either X or O all of the time, or randomly X or O, and the player has the chance to enter the symbol in that segment if he stops the skill-shot feature 11 at its maximum position. If the player is successful in entering the symbol another segment is chosen at random to flash and the process repeated. It may become more difficult to stop the skill-shot at its maximum as successive skill-shots take place, or as the matrix fills up.

If at the end of any of the features (a) to (e) one or more lines is all X's or O's the player enters the ladder 9 at the level corresponding to the total number of completed lines.

It will be appreciated that each of the features (i) to (iii) and (a) to (e) is independent of the others and any could be modified, omitted or replaced with another feature. Features (b), (c) and (e) are considered of particular importance to the dual image matrix 6 since they can use the ability of the segments to show X's or O's.

It is also clear that the symbols in the matrix display do not have to be exactly the same as those in the reel display. For example they could have number 1's and number 2's, or two or more different reel symbols

may represent the same matrix symbol.

A second machine, the display 20 of which is shown in Figure 2, is similar in many ways to the first machine and comprises a first reel display 21, a second reel display 22, a matrix display 23, and a points indicator 24.

The first reel display 21 has three reels 25, 26, 27 each having a series of symbols including a variety of fruit symbols and V's and shields 29. The matrix display has nine segments 30 each of which can display a V 28' or a shield 29'. V's and Shields are entered into the matrix 23 in corresponding positions to their appearance in the first reel display 21.

The second reel display 22 has three reels 31, 32, 33 which carry only three types of symbol, V's, Shields, and blanks (alternatively there may be no blanks).

When a player plays the 'basic' game the reels 25, 26, 27 spin and the normal prizes for a winning combination in the pay line apply. In addition, any V's or Shields in view in the first reel display 21 are transferred to the matrix display 23. The player is awarded prizes for the number of lines of all V's or all Shields shown in the matrix (prizes for a 'mixed' line may also be given if desired).

The player has the choice of either taking his prize for the number of lines achieved and collecting it; taking the award and gambling it; taking the award and transferring it to a Club Meter; or leaving the award in the hope that the matrix will be carried on to the next game and that he will win an even bigger award in the next game.

A player may also be awarded points for the number of shields or V's in view, irrespective of their position in the matrix. A table of possible point allocations is given below:-

20	No. of Symbols in View (mixed symbols)	Award
25	5	2
	6	4
	7	10
	8	40
30	9	100

When a player has won four points or more he can chose to (i) collect the win or (ii) play a 'second' V and Shield game on the second reel display 22. If the player decides to play the V and Shield game the player chooses a stake from a variety of options (for example 4, 8 or 16 points) and the stake is deducted from either the Club Meter or the monetary credits the player has in the machine. The player then chooses to be either Shield or V and gambles his stake on the number of his chosen symbols which appear in the second reel display 22. The more of his chosen symbols are in view the more he wins, and the greater the stake the more he wins for any particular number of symbols in view. For example, if three of the chosen symbols are in view the player may win 4, 12, or 24 points depending upon whether he staked 4, 8 or 16 points. The player may not win at all if he stakes 4 or 8 points and only 2 chosen symbols are presented in the second reel display, winning , for example, only 8 points for a 16 point bet. A maximum winnings may be provided so that for example seven chosen symbols in view may pay the same, maximum, payout irrespective of whether 8 or 16 points were staked.

It will be appreciated that references to reels include equivalents such as electronically generated images of reels.

### Claims

1. A gaming or amusement-with-prizes machine comprising a first, reel, display (2;21) comprising a number of reels (3,4,5;25,26,27) carrying symbols (12,13,14;28,29) and a second, matrix, display (6;23) comprising a grid or matrix, characterised in that the matrix display is adapted to display a first symbol (12';28') and a second symbol (13';29').
2. A machine according to claim 1 characterised in that matrix display (6;23) has a plurality of display segments (7;30) and is capable of displaying first and second symbols (12' and 13';28' and 29') simultaneously in different segments.

3. A machine according to claim 2 characterised in that at least one segment (7;30) is capable of displaying the first and second symbols (12' and 13'; 28' and 29') as alternatives.
- 5 4. A machine according to claim 3 characterised in that said one segment displays only one symbol at any one time.
5. A machine according to claim 3 or claim 4 characterised in that each segment (7;30) of the matrix display is capable of displaying the first and second symbols (12' and 13'; 28' and 29') as alternatives.
- 10 6. A machine according to any one of claims 2 to 5 characterised in that a first symbol (12') displayed in a segment (7) can be changed to the second symbol (13') during the playing of the machine.
- 15 7. A machine according to any preceding claim characterised in that the reels (3,4,5;25,26,27) carry first and second reel symbols (12 and 13; 28 and 29) or other differentiating indicia corresponding to the first and second matrix symbols (12' and 13'; 28' and 29') the appearance of the first or second reel symbols in the reel display (2;21) upon a play of the machine resulting in the appearance of corresponding first or second matrix symbols in the matrix (6;23).
- 20 8. A machine according to claim 7 which comprises a 3 x 3 matrix display, and a reel display having three reels with a central win line and upper and lower adjacent lines visible in the reel display, and the arrangement being such that there is a one-to-one correspondence between the positions in the matrix which show the first or second matrix symbols and the positions in the reel display of the first and second reel symbols or indicia.
- 25 9. A machine according to any preceding claim characterised in that it is provided with a feature such that upon the winning of the feature all of the first and second matrix symbols (12' and 13'; 28' and 29') displayed at that time in the matrix are changed to the same symbol, which may be the first or second symbol.
- 30 10. A machine according to any preceding claim characterised in that the matrix display (6;23) may be held and continued over to successive spins of the reels (3,4,5; 25,26,27).

35

40

45

50

55



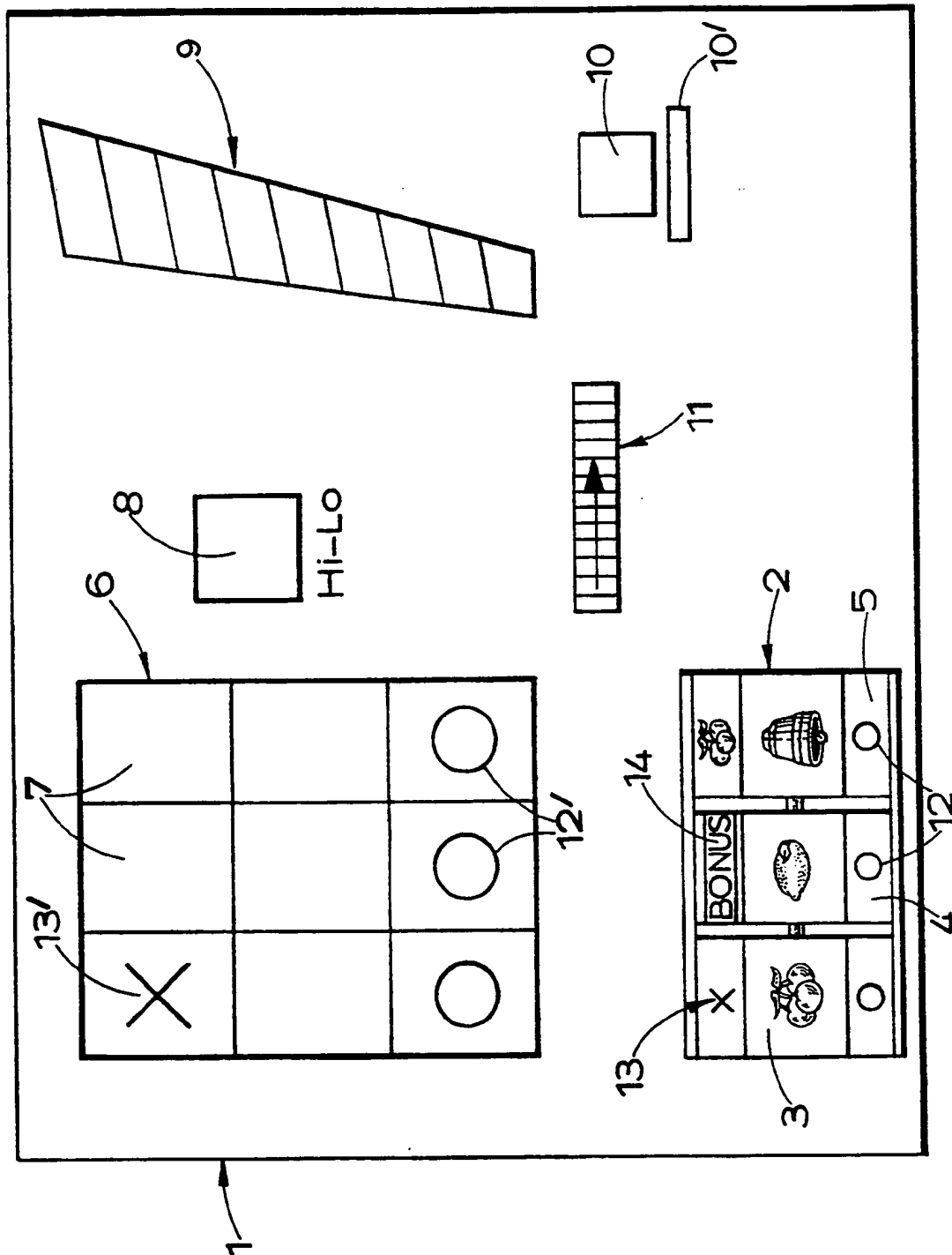
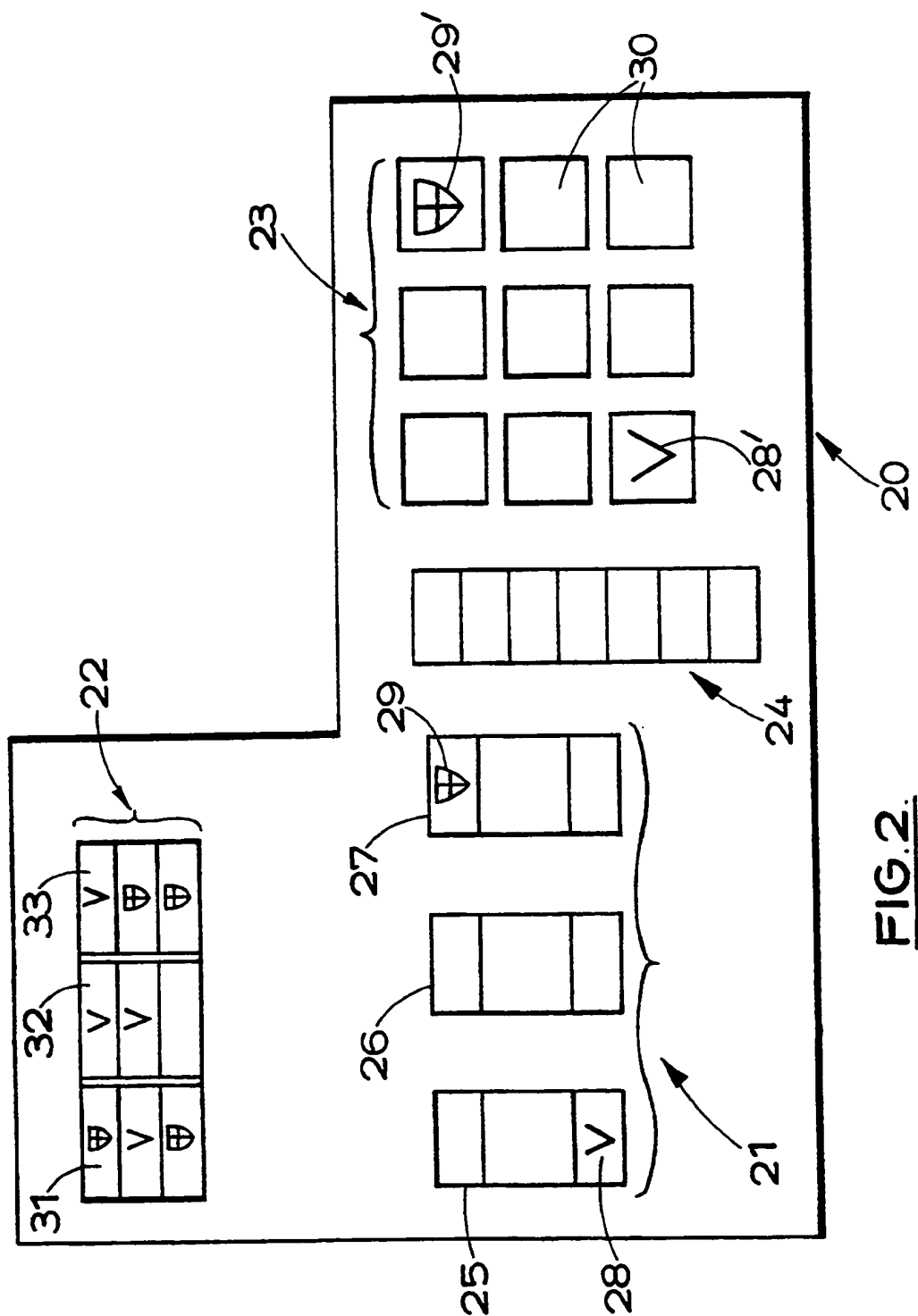


FIG 1.





European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number

EP 91 30 1773

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X	GB-A-1 568 522 (WHITE) * page 5, line 72 - line 121; claim 7 *	1-10	G07F17/34
A	EP-A-0 060 019 (BARCREST) * page 5 * * abstract *	1	
A	GB-A-2 100 492 (QUESTENCO LTD) * page 2, line 33 - line 57 *	1	
A	GB-A-2 137 392		
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			G07F
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 22 NOVEMBER 1991	Examiner TACCOEN J-F. P. L.
<p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone  Y : particularly relevant if combined with another document of the same category  A : technological background  O : non-written disclosure  P : intermediate document</p> <p>T : theory or principle underlying the invention  E : earlier patent document, but published on, or after the filing date  D : document cited in the application  I : document cited for other reasons  A : member of the same patent family, corresponding document</p>			

EPO FORM 1503 (01.82) (P0401)

